

**STATE OF GEORGIA
TMDL IMPLEMENTATION PLAN FOR
CHATTAHOOCHEE RIVER**

TEMPERATURE

**Prepared by
The Georgia Department of Natural Resources
Environmental Protection Division
Atlanta, GA**

TMDL Implementation Plans are platforms for establishing a course of actions to restore the quality of impaired water bodies in a watershed. They are intended as a continuing process that may be revised as new conditions and information warrant. Procedures will be developed to track and evaluate the implementation of the management practices and activities identified in the plans. Once restored, appropriate management practices and activities will be continued to maintain the water bodies.

INTRODUCTION

The Georgia Environmental Protection Division (EPD) identified a 9.5 mile segment of the Chattahoochee River, from Peachtree Creek to Utoy Creek, as not supporting its designated use of fishing with respect to water temperature. This segment is on the state 303(d) list for temperature. The applicable Georgia water quality standard for temperature states that at no time shall the water temperature exceed 90°F and at no time is the temperature of the receiving water to be increased more than 5°F above intake temperature.

Five point sources discharge effluent to this segment with temperatures higher than the upstream or background temperature of the river. These sources include two power plants owned and operated by Georgia Power Company, Plant Atkinson and Plant McDonough, and three municipal wastewater facilities, R.L. Sutton, R. M. Clayton, and South Cobb.

An examination of existing temperature data indicated that violations of Georgia's temperature standards have occurred in the listed segment of the Chattahoochee River, from Peachtree Creek to Utoy Creek. Plants Atkinson and McDonough withdraw cooling water from the Chattahoochee River for once-through condenser cooling and discharge waste heat to the segment. The three municipal wastewater treatment facilities also discharge effluent to the segment with temperatures usually higher than the background river temperature. The

effluent temperatures from these wastewater treatment facilities derive from flow through the sewer system and the waste treatment process, not from industrial cooling.

DISCUSSION OF POLLUTANT

An increase in water temperature that adversely affects aquatic organisms is known as thermal pollution. Thermal pollution can have numerous effects on an aquatic ecosystem, including a decreased capacity for dissolved oxygen in the water column and interference with the reproduction process, increase in vulnerability to disease and direct mortality of fish and other aquatic organisms.

PLAN FOR TMDL IMPLEMENTATION

TMDL implementation will be handled through the NPDES permitting process. Georgia Power Company has committed to remove their heat load from the river. When the discharge permit for Plant McDonough was renewed in 2003, EPD included a compliance schedule for total heat load removal by 2009. Plant Atkinson was retired December 31, 2002, thereby completely removing its load from the river. The three wastewater treatment facilities, in the absence of the two power plants, do not threaten the temperature standard under current permit conditions. No temperature reductions are needed for these remaining discharges. In the future, if increases are requested for these permitted flows, the heat balance method outlined in the TMDL can be used to determine maximum allowable wastewater temperatures.

MONITORING PLAN

During the period beginning on the effective date of the Plant McDonough NPDES permit and lasting through (October 2009), Georgia Power is required by the permit to sample the final combined discharge on a daily basis. After 2009, the end point of the compliance schedule, Georgia Power will be required to return to the original permit requirement of sampling the Final Combined Discharge once per week.

The GAEPD has adopted a basin approach to water quality management that divides Georgia's fourteen major river basins into five groups. This approach provides for additional sampling work to focus on one of the five basin groups each year and offers a five year planning and assessment cycle. The Chattahoochee and Flint River Basins were the subjects of focused monitoring in 2000 and will again receive focused monitoring in 2005.

REFERENCE

Georgia Rules and Regulations for Water Quality Control, Chapter 391-3-6-.03,
Water Use Classifications and Water Quality Standards,
Revised February 2004.

GAEPD, 2003. Chattahoochee River Basin Temperature TMDLs. January 2003.

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